Sentiment Analysis of Law Enforcement Performance Using Support Vector Machine and K-Nearest Neighbor

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Abstract*— Sentiment analysis or opinion mining is a method to group opinions or reviews into positive or negative. It is important sources for decision making and can be extracted, identified as well as evaluated from online sentiments reviews. This research discussed sentiment analysis in law enforcement on a law case in Indonesia. The analysis uses Support Vector Machine and K-Nearest Neighbor (KNN) for data classification integrated with Particle Swam Optimization (PSO) to increase their performance. The experiment results show that PSO increase the performance of both algorithm. PSO method make value SVM with PSO where value C = 1.0 and Epsilon = 1.0 accuracy 100% while for algorithm KNN with PSO 93.08%. This result show SVM algorithm more accurate than KNN algorithm by using PSO optimization. The performance of law enforcers in the trial case get more positive responses from the people of Indonesia in accordance with their comments or tweets in social media.

Keywords—classification opinion, KNN, SVM, PSO, Sentiment, opinion mining, K-Fold, text mining